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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/862,591	05/23/2001	Salah M. Oweis	A7969	8398

7590

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EXAMINER

MAPLES, JOHN S

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 07/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/862,591

Applicant(s)

OWEIS ET AL.

Examiner

John S. Maples

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 April 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 and 26-57 ~~is/are~~ pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27, 32, 34-37 and 46 ~~is/are~~ allowed.
- 6) ☒ Claim(s) 1-3, 5, 7, 10-13, 15, 19, 21-24, 26, 28, 30, 31, 33, 38, 39, 44, 45, 47-49 and 51 ~~is/are~~ rejected.
- 7) ☒ Claim(s) 4, 6, 8, 9, 14, 16-18, 20, 29, 40-43, 50 and 52-57 ~~is/are~~ objected to. **BENE DESERVANT ON A REJECTED CLAIM.**
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 April 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 10-13, 15, 19, 21-24, 26, 30, 33, 44, 47-49 and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Lim-US 4,567,119.

See column 3, line 60 through column 4, line 36 of the patent to Lim along with all of the figures.

Applicant's arguments have all been considered but are not deemed persuasive. Applicant argues that Lim does not teach a single flow path which contacts the cell assemblies in a serial manner. The examiner respectfully disagrees. Reference is made to Figure 1 in Lim. As coolant fluid flows vertically down tube 26 as seen by the arrow, the fluid flows in a serial manner through all of the horizontal coolant tubes. This is because the fluid first enters the uppermost horizontal tube, then flows down vertically and then enters the next higher horizontal tube and so forth down vertically in a single flow path. The fluid continues through the vertical tube until all horizontal tubes are filled with coolant in a serial manner.

In addition, it is noted that applicant has used the open-ended word "comprising" in claim 1. This word allows additional elements to be present in Lim than just those elements presented in claim 1 with the reference still anticipating the claimed subject matter. Thus even though Lim includes limitations in addition to those being claimed, claim 1 is met by these teachings.

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Another argument by applicant is that Lim discloses a parallel path for the coolant flow instead of a serial flow. This may be true, however, as set forth in the preceding paragraphs, in the battery of Lim, coolant travels vertically down tube 26 and then flows in a serial manner into each horizontal tube one at a time.

Applicant argues that claim 22 includes the limitation that a thermally conductive medium is positioned between at least one of the thermal jackets and the cells. Claim 22 does not include this limitation so this argument is deemed moot.

Claim 47 is unpatentable over the teachings to Lim for the same reasons applied against the arguments by applicant with regard to claim 1 since claim 47 includes similar limitations.

3. Claims 22-24, 26, 30, 31, 33, 44 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Walker-US 1,152,247.

See the drawing figures in Walker and page 1 through page 2, the left column.

Applicant's amendments and arguments relating to claim 11 and those claims dependent thereon is convincing and the rejection based on Walker against this claims has been dropped.

Applicant argues that Walker does not teach the thermally conductive medium positioned between at least one of the thermal jackets and one of the cells is not convincing because applicant has not claimed the same in claim 22.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 7, 28, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim.

The only claimed feature not shown by Lim is the pump for circulating coolant. It would have been obvious for one of ordinary skill in this art at the time the invention was made to have included in the battery of Lima pump so that the fluid could be circulated through all of the batteries in a quicker manner thus cooling the battery at a faster rate. The same would insure a longer life for the batteries.

Applicant's arguments relating to the above rejection have all been considered but are not persuasive. Applicant asserts that Lim does not make the suggestion to use a pump in circulating coolant nor does Lim cite cooling the battery at a faster rate to insure a longer life for the battery. It is true that Lim does not recite what applicant has stated, however, Lim recites in column 4, lines 7-36 the use of the coolant to remove heat from the battery. Pumps are notoriously well known to aid in movement of fluid. Because Lim desires to remove heat as cited above, to insure that the heat is removed a pump

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would have been obvious for the reasons cited above. This would especially be true if merely passing the coolant through the batteries in Lim does not remove all of the desired heat. The inclusion of a pump in the teachings of Lim is a straightforward addition in the battery fluid cooled art of no patentable moment.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John S. Maples whose telephone number is 703-308-1795. The examiner can normally be reached on Monday through Thursday from 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 703-308-2383. The fax phone numbers for the organization where this application or preceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

A handwritten signature in black ink, appearing to read 'J. Maples', with a stylized, cursive script.

John S. Maples  
Primary Examiner  
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JSM/7-14-2002